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Research

Breastfeeding experiences of Japanese women living in Perth, Australia

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Abstract

The aim of this study was to document the breastfeeding practices of Japanese-Australian mothers living in Perth. A cross-sectional survey of mothers who had delivered babies in Japan or Australia or both was carried out on a sample of 163 mothers recruited through Japanese social and cultural groups in Perth and by a 'snowball' technique. Factors involved in the decision to breastfeed were analysed using multivariate regression analysis. The main outcome measures were the initiation and duration of breastfeeding and cultural beliefs about breastfeeding. Breastfeeding initiation rates of the Japanese-Australian mothers in Japan and in Australia were higher than for other Australians and are consistent with breastfeeding rates in Japan. In Australia, 65% of Japanese-Australian mothers were still breastfeeding at six months. The most common reason for the decision to cease breastfeeding was 'insufficient breastmilk'. The significant factors in breastfeeding duration were 'the time the infant was introduced to infant formula', 'the time when the feeding decision was made', 'doctors support breastfeeding' and 'the mother received enough help from hospital staff'; these were positively associated with the duration of breastfeeding. Japanese mothers take a lot of notice of advice given by health professionals about infant feeding practices.

Keywords: breastfeeding, Australia, Japanese mothers, cultural influences

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INTRODUCTION

Breastfeeding is the normal and most appropriate method for feeding infants and is supported by public health policy in both Japan and Australia. Internationally, the Baby Friendly Hospital Program is a major part of the World Health Organisation (WHO) strategy to promote breastfeeding, but only 25 out of 4800 maternity hospitals were recognised as Baby Friendly Hospitals in Japan in 2002 (Nagayama 2002).

In traditional Japanese society, breastfeeding was the only way to feed infants, although the aristocracy occasionally used wet nurses. The Japanese people have lived with a mixed religious environment for more than one thousand years and each religion had traditional practices to be used when a mother had an inadequate breastmilk supply (Takeuchi 2002). Nursing mothers ate special foods and took traditional medicines to promote milk production. Breastfeeding was continued through the second or third years, until the birth of their next child. Thus, during her fertile years, a mother was usually either pregnant or lactating, leading to the availability of some wet nurses in the community (Takeuchi 2002). During the last half of the 20th century, there was a steady decline in breastfeeding rates until 1974-75 when recommendations of WHO and the Japanese government supporting breastfeeding were announced. The decline was greatest in the upper socio-economic groups. Since 2001, the Ministry of Health, Labour and Welfare has been promoting breastfeeding as a national campaign – 'Sukoyaka Family 21'. Breastfeeding rates in Japan, from national surveys, are shown in Table 1.

Table 1: Trends in infant feeding practices in Japan

	Percentage breastfeeding at one month		Percentage breastfeeding at three months	
Year	Any breast-feeding	Exclusive breast-feeding	Any breast-feeding	Exclusive breast-feeding
1960	79.5	70.5	72.9	56.4
1970	73.7	31.7	59.1	31.0
1980	80.7	45.7	59.5	34.6
1985	90.9	49.5	71.6	39.6
1990	86.9	44.1	66.9	37.5
1995	92.1	46.2	72.9	38.1
2000	88.8	44.8	69.9	39.4

Sources: Infant Physical Growth Surveys (Ministry of Health 1960, 1970, 1980, 1990); Infant Physical Growth Survey (Ministry of Health, Labour and Welfare 2000); Infant Nutrition Survey (Ministry of Health 1985, 1995) all quoted in Annual Statistical Report of National Welfare Trends, 1999

Until 2000, the Ministry of Health (now the Ministry of Health, Labour and Welfare) recommended that children should be weaned from the breast at ten months of age. The rationale for this policy was that a longer duration of breastfeeding led to the late introduction of solid foods and possible malnutrition. In 2001, the policy was changed to advise that children should be weaned from the breast at 18 months of age (Sakai 2001).

In Australia, breastfeeding rates of mothers of Asian ethnic origin are often below the Australian average (Binns & Davidson 2003b). The estimated number of Japanese females in Australia in 2001 was 12 204 and they had a total fertility rate of 1.797, slightly above the total Australian rate of 1.741 (ABS 2002). While the number of Japanese residents in Australia is not large, it is steadily increasing. Currently 40% of long-term arrivals in Australia come from Asia and it is important to study the infant feeding practices of each group to ensure that Australia's breastfeeding promotion strategies remain appropriate.

To provide information on infant feeding practices of Japanese mothers, a cross-sectional survey was undertaken in Perth in 2003. The objective was to explore the opinions and practices of Japanese-Australian mothers living in Perth about the benefits of breastfeeding and to document their breastfeeding initiation and duration rates.

METHODOLOGY

The sample consisted of Japanese mothers living in Perth. Names of possible subjects were obtained from Japanese social and cultural groups and a 'snowball' technique was used to increase numbers. The inclusion criteria for the study were Japanese mothers who were born in Japan, had spent at least 20 years of their life there before migrating to Australia. The Japanese Consulate estimates that the total number of Japanese citizens of all ages living in Perth to be 2 835. A total of 297 questionnaires were distributed and 163 completed questionnaires were returned by mail giving an overall response rate of 55%.The questionnaire employed in this study was a modified version of the original Perth Infant Feeding Study (Scott, Binns & Aroni 1997). After translation, it was pilot tested on a group of 20 Japanese mothers and further modified before data collection began. The Curtin University Human Research Ethics Committee approved the study. All data were coded and then analysed using the Statistical Package for Social Sciences (SPSS V10).

The analysis was conducted separately for mothers who had given birth in Japan (n = 74) and mothers who had given birth in Australia (n = 89). The 'any breastfeeding' category included all infants fed breastmilk or a combination of breastmilk and infant formula and/or cow's milk. Data on breastfeeding rates were compared with the 1995 Australia's National Health Survey (Donath & Amir 2000) and data from the 2003 Perth Infant Feeding Study (Graham et al 2004).

To adjust for confounding factors, multivariate logistic regression analysis was employed to determine which factors

were associated with the initiation of breastfeeding. Multivariate regression analysis was used in the analysis of breastfeeding duration. Variables found to have a non-significant effect on the model were then removed in a backward stepwise fashion. The age of the last-born child in each country was entered into each model to control for any time-related differences in infant feeding practices, but no statistically significant results were found.

RESULTS

Of the 163 mothers who completed the questionnaire, 74 mothers (46%) had given birth in Japan, 89 (55%) in Australia, and 9 (6%) in both Japan and Australia. The age of the respondents ranged from 27 to 60 years, with a mean age of 44. The median period of residence in Australia was 7 years and 30% of the mothers were in formal employment, compared to 66% of their partners. Table 2 presents some socio-demographic characteristics and smoking practices of the sample.

Table 2: Socio-demographic characteristics of Japanese mothers

Characteristics	Number	Frequency (%)
Age (years)		
20-30	14	8.9
31-40	66	42.1
41-50	28	17.8
51-60	49	31.2
Marital status		
Married	131	84.0
Others	25	16.0
Education		
Secondary	31	19.7
TAFE	42	26.8
Tertiary education	84	53.5
Smoking before pregnancy		
Yes	31	19.5
No	128	80.5
The baby's father smoked while the mother was pregnant		
Yes	56	37.1
No	95	62.9

The mean age at time of delivery of the mothers who had given birth in Japan was 30.3 ± 3.5 years and 32.7 ± 4.6 years for mothers giving birth in Australia. The mean present age of the children born in Japan was 19.3 ± 14.0 years and 6.3 ± 7.6 years for children born in Australia.

The mothers were asked what they thought were the main reasons that Japanese mothers stop breastfeeding and these are detailed in Table 3. The most common reason was the perceived or real lack of breastmilk (77%).

Table 3: Reasons why Japanese women stop breastfeeding according to Japanese-born mothers in the study

Reasons	Frequency (%)*
Mothers do not have enough milk	76.7
Mothers go back to work or study	64.2
Health Professionals (doctors and nurses) suggest bottle-feeding	17.6
Mothers find breastfeeding too painful	6.9
Friend or relatives suggested bottle-feeding	6.3
Mothers want to continue smoking	5.7
Grandmother suggested bottle-feeding	3.8
Formula milk is better	3.1
Mothers play a lot of sports	1.3
Mother contracted diseases	1.3
Baby's father disapproves	0.6

* Mothers may have given more than one reason.

The mothers were asked how they thought Australian mothers generally fed their babies; 47% stated that they did not know, 36% said breastfeeding and 17% said bottle-feeding.

The mothers were also asked how they fed their last-born infants. Initiation rates were very high, but the rates for 'any breastfeeding' declined by 26 weeks post-partum in both Japan and Australia (Table 4).

The median duration of 'any breastfeeding' was 26 weeks in Japan and 36 weeks in Australia. The comparable figure in the Perth Infant Feeding Study was 26 weeks (Scott, Binns & Aroni 1996). The 'any breastfeeding' rate, from hospital discharge to 12 months, for infants born in Australia was higher than for infants born in Japan (Table 4). Details of some of the factors that are known to influence breastfeeding are in Table 5. The majority of the mothers, made their decision about how to feed their babies before becoming pregnant. The time before the baby was given to the mother to breastfeed was longer in Japan, with 30% not feeding for more than 24 hours. Nearly half (49%) of mothers who had given birth in Australia put their newborn babies to their breast soon after birth (<1 hr) compared to 20% of mothers who had given birth in Japan.

Percentage of Japanese women breastfeeding in Japan and Australia compared with rates in Western Australia

astfeeding	In Japan[1] % (95%CI)	In Australia[2] % (95%CI)	1992 Western Australia % (95%CI)[3]
ital discharge	98.6 (95.9-100)	100(96.1-100)	87.0(83.7-90.3)
'eeks	73.0 (62.9-83.1)	80.9 (71.9-89.9)	69.0(64.5-73.5)
'eeks	50.0 (38.6-61.4)	65.2 (54.3-76.1)	50.6 (46.1-55.1)
'eeks	19.1 (10.1-28.0)	28.1 (17.9-38.3)	21.2(NA)

[2]n = 89 [3](Scott, Binns & Aroni 1996)

Comparison of factors influencing infant feeding practices in Japan and Australia

	In Japan % (n)	In Australia % (n)
ls used to increase breastmilk supply		
	25.7 (19)	45.0 (50)
‹e	25.7 (19)	12.2 (11)
nal Japanese food	18.9 (14)	4.4 (4)
massage	56.8 (42)	26.7 (24)
ıcision on breastfeeding		
ɔecoming pregnant	57.1 (40)	71.9 (64)
the pregnancy	8.6 (6)	12.4 (11)
ımester or after birth	34.3 (24)	17.7 (14)
g habits of newborn		
ame bed with mother	23.9 (17)	23.3 (20)
'ate bed	62.0 (44)	54.7 (47)
ıer room	14.1 (10)	22.1 (19)
; for breastfeeding by doctors and nurses	33.3 (23)	28.4 (25)
father's preference for infant feeding		
eeding	25.7 (18)	40.7 (37)
ind about baby feeding	57.1 (40)	41.8 (38)
liscussed the matter	15.7 (11)	11.0 (10)

Table 6: Factors associated with longer overall duration of breastfeeding[1] in Australia after adjustment for potential confounders[2] (n = 89)

Variable[3]	Coefficients	95% CI	P value
Time the infant was introduced to infant formula	0.342	0.173-0.511	0.000
Time when the feeding decision was made	0.708	0.255-1.160	0.003
Child's birth year	-0.096	-0.172- -0.019	0.016
Doctors support for breastfeeding	1.679	0.421-2.938	0.011
The mother received enough help from hospital staff	1.376	0.176-2.576	0.026

Multivariate regression model d.f. 5, F value 8.474, *P* value = 0.000.

[1] Breastfeeding refers to any breastfeeding.

[2] Non-significant variables were mother's age at child's birth, the age at which cow's milk and solid foods were introduced, father's preferred infant feeding method, maternal grandmother's preferred infant feeding method, grandmother's breastfeeding experiences, length of time mother had lived in Australia, marital status, breast massage and education.

[3] All variables in the final model were variables for which, when excluded, the change in deviance compared with the corresponding χ^2 test statistic on the relevant degrees of freedom was significant.

Factors associated with longer overall duration of breastfeeding in Australia are shown in Table 6. The time the infant was introduced to infant formula, time when the feeding decision was made, support of doctors for breastfeeding and the mother receiving enough help from hospital staff were positively associated with a longer duration of breastfeeding for the mothers who had given birth in Australia. In this group of mothers, the year of the child's birth was negatively associated with the duration of breastfeeding. A similar model was developed for the mothers who had given birth in Japan, but the only significant factor was a negative association with the year of birth.

DISCUSSION

Cultural beliefs are important in understanding feeding patterns and the decision-making processes involved (Bentley, Dee & Jensen 2003). Historically, except for a very few aristocratic families (who used wet nurses), breastfeeding was the only way of infant feeding in traditional Japan and hence was universal (Takeuchi 2002). Although the majority of the mothers interviewed for this study had resided in Australia for more than five years, approximately half of them did not know, or weren't sure, how Australian mothers feed their babies. Some Japanese mothers (17%) thought that Australian women usually bottle-fed their babies, when in fact over 90% of Australian women breastfeed for some period of time (Binns & Davidson 2003a). This response suggested that this population is generally living in a degree of social isolation, probably due to difficulties in communicating in English. During their pregnancy, the smoking rate of the Japanese mothers was only half the 26% rate of the Australian women (Gilchrist et al 2004).

The most common reason that the mothers gave for stopping breastfeeding was insufficient breastmilk and the Japanese mothers both in Australian and in Japan were no different. It is common for women to doubt the adequacy of their breastmilk, although only a small percentage actually have a physiological deficiency (Melnikow & Bedinghaus 1994). It has been suggested that 'insufficient breastmilk' is a socially acceptable excuse given by a woman to justify her decision to discontinue breastfeeding (Hitchcock & Coy 1988). Many women have already decided to stop breastfeeding prior to visiting a health professional for confirmation of their diagnosis of breastmilk insufficiency, as they often stop breastfeeding despite advice and encouragement to the contrary (Scott, Binns & Arnold 1997).

The findings from this study show that breastfeeding initiation rates for Japanese immigrant women, with infants born in Japan or Australia, are significantly higher than the current Australian rates (Donath & Amir 2000), but by six months were similar to recent Australian rates.

Starting to breastfeed within the first hour of birth is good for both mother and infant and for continued breastfeeding (Salariya, Easton & Carter 1978). This study showed that health workers in Australia did much better in encouraging the mothers to put their babies to their breasts immediately after delivery than health workers in Japan.

Over half of the study population had decided to breastfeed prior to becoming pregnant. Prenatal intentions are the strongest predictors of actual practices. In the Perth Infant Feeding Study, the factor most strongly associated with the cessation of breastfeeding while in the hospital was the time at which the feeding decision was made (Scott et al 2001). The earlier the decision was made, the higher were the initiation and duration rates. If, during pregnancy, ambivalence is expressed about whether to breastfeed, then the likelihood of weaning in the early weeks after birth is greatly increased. Furthermore, a consistent association has been found

between intended and actual duration of breastfeeding. Women who decided to breastfeed during or late in pregnancy, have negative attitudes toward breastfeeding and have low confidence in their ability to breastfeed, are also at risk to prematurely discontinue breastfeeding (Dennis 2002). Emphasis on breastfeeding in the first antenatal contacts is important in promoting breastfeeding rates.

In this study, 26% of the mothers in Japan and 41% of the mothers in Australia thought that their partners preferred breastfeeding while 49% of the mothers in Japan and 29% of the mothers in Australia thought that their mothers preferred breastfeeding. Studies in Australia and the USA have shown that fathers' and grandmothers' opinions were both strong, independent predictors of maternal intention to breastfeed, and intention was strongly related to initiation (Scott, Binns & Aroni 1997; Bentley, Dee & Jensen 2003).

Mothers who thought that their doctor supported breastfeeding were likely to breastfeed for longer periods in Australia. Health professionals have an important role to play in the promotion and support of breastfeeding in this population. This finding is consistent with a number of international studies that have also shown a positive influence of supportive health professionals on the duration of breastfeeding (Dennis 2002). Secondary analyses of the 1988 U.S National Maternal and Infant Health Survey of 3 659 non-Hispanic and 5 142 African-American women found that breastfeeding information given as part of prenatal classes may positively influence breastfeeding duration (Balcazar, Trier & Cobas 1995).

The year of the child's birth was negatively associated with the duration of breastfeeding both in Japan and Australia. Children born in the1990s were less likely to be breastfed both in Japan and Australia compared to children born more recently. This reflects the trend in developed countries towards infant formula feeding of babies in the 1970s and 1980s before the current trend of returning to breastfeeding in the last decade of the 20th century (Webb et al 2001).

There are a number of limitations that need to be considered when interpreting the results of this study. The sample size is limited and the study relied on retrospective data. Nevertheless the data is consistent with results of the Japanese National Surveys (Table 1).

CONCLUSIONS

This study has documented the breastfeeding experiences of Japanese-Australian mothers and some of the social and cultural factors that affect women's attitudes towards breastfeeding. Understanding the factors involved in the duration of breastfeeding provides opportunities to develop health promotion activities to promote breastfeeding to this population.

Breastfeeding education should address the issue of breastmilk sufficiency and insufficiency (real and perceived) to allay the common concerns of mothers. Mothers should be informed that more frequent breastfeeding is an effective technique for increasing breastmilk supply. They need to have realistic expectations about how often and for how long human children need to nurse, so that they will nurse often enough to produce sufficient milk. Anticipatory guidance should be provided to help mothers manage transient breastmilk insufficiency should it occur.

Health practitioners have an important role in influencing infant feeding beliefs and practices of Japanese-Australian mothers. The education and support that health professionals provide with regard for the mother's cultural background is important in helping mothers make the choice to breastfeed. To promote and maintain breastfeeding among Japanese-Australian women in Australia, breastfeeding education programs should be culture and language specific. The content of the education programs should not only include the benefits of breastfeeding but also place emphasis on the ways of managing lactation problems to maintain breastfeeding. New immigrants need to be encouraged to continue traditional breastfeeding practices. Public health services for pregnant women need to employ more effective strategies for promoting breastfeeding and appropriate timing of supplementary feeding, they should also consider the impact of the new culture on those immigrant ethnic mothers.

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